

### REMARKS

This amendment responds to the office action dated September 27, 2007.

The Examiner rejected claim 29 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner contends that the limitation of “wherein said magnification is increased when said confidence level falls below a first threshold and decreased when said confidence level falls below a second threshold less than said first threshold” is not supported in the specification.” The applicant respectfully disagrees. The specification, at page 7 line 10 to page 8 line 5 clearly describes an embodiment where, in response to a user’s on-screen selection of a target to be tracked, a quantitative confidence level is continuously measured. If that confidence level should decrease (i.e., if it drops below the variable threshold measured at the time the target is manually acquired, or some other threshold, such as a percentage drop from the confidence level measured at the time of acquisition, or a fixed confidence threshold, or either), then the system responds by *zooming in*, on the assumption that the camera view may not be close enough in on the subject to distinguish it from the surroundings. Though the specification notes that in many circumstances, the automated response of zooming in will cause the confidence level to rebound, or at least permit a user to manually re-acquire the target, the specification also discloses that in some other circumstances, such as where the target is actually no longer within the field of view of the camera, the confidence level may not rebound, but actually continue to drop:

When the confidence level is *sufficiently low (or losing the target totally)* the present inventors came to the realization that most likely the target is no longer visible within the viewfinder 24. Accordingly, in such an event, the system may automatically zoom out . . . to present the viewer with an image having a greater . . . field of view. In most instances, the target will be visible to the user within the new field of view image. The user may then select the target within this field of view *in the manner described above*, as desired. *Alternatively, after the zooming in response to the confidence level the system may exit the tracking functionality.*

Specification at p. 7 line 27 to p. 8 line 5 (emphasis added).



The italicized portions of the passage above demonstrate both that, in the described embodiment, the zooming out response *follows* the zooming in response, and that whatever confidence threshold is set for automatically zooming out is less than the corresponding threshold for zooming in (as it *must* be, else the zooming out functionality would always occur *before* the zooming in functionality, contradicting what is actually disclosed with respect to this specific embodiment.) Therefore, notwithstanding the Examiner's assertion to the contrary, the specification indeed discloses the limitation of ““wherein said magnification is increased when said confidence level falls below a first threshold and decreased when said confidence level falls below a second threshold less than said first threshold” is not supported in the specification.” The applicant therefore respectfully requests that the rejection of claim 29 under 35 U.S.C. § 112 be withdrawn.

The Examiner rejected claims 27-29 under 35 U.S.C. § 103(a) as being unpatentable over Loveland, U.S. Patent No. 6,473,819 in view of Shahraray, U.S. Patent No. 6,211,912. The Examiner's rejection is not proper, as the Examiner misreads the disclosure of Shahraray; in fact, that reference fails to disclose what the Examiner asserts it does. Independent claim 27, from which claims 28 and 29 respectively depend, claims a method involving automatically “tracking a target” moving within the field of view of a camera (e.g. a surveillance camera) and recites the limitation of “*increasing* magnification of an image visible to said operator in response to a decrease in said level of confidence” that the target is being tracked by the automated system (emphasis added). The Examiner concedes that the primary reference Loveland fails to disclose this limitation; in fact, the primary reference *teaches against* it, instead disclosing that the magnification should be decreased when the corresponding tracking confidence level drops.

The Examiner instead asserts that the limitation of increasing magnification in response to a decrease in confidence that an object is being tracked is disclosed by Shahraray. It is not. Shahraray, rather than disclosing a system for tracking an object within the field of view of a camera, like Loveland, instead is *solely* directed to a method of detecting *camera movement in a prefabricated video*, and specifically is directed to a method for detecting scene changes characterized only by camera movement, rather than scene cuts (which could be detected by threshold differences in color histograms, or other image processing techniques). Stated more



simply, while the present invention and the primary reference, Loveland, are directed to methods for determining the *physical* movement of an object viewed through a camera lens, and responding to those detected movements by manipulating a camera observing the physical movements, the secondary reference is instead directed to detecting the *prior* movement of a camera used to film a video being analyzed, *completely irrespective of the relative movement of any objects recorded by that camera*. To that end, the secondary reference merely discloses that, when a camera *zooms in*, it creates the *illusion* of objects moving radially outward *so as to leave the field of view of the camera*. Thus, the secondary reference discloses that where such features, i.e. many objects leaving the field of view of the camera in a radial pattern, are detected, it can be assumed that the camera zoomed in. Note that the secondary reference does not teach taking the *action* of zooming in, *in response to* an object leaving the field of view of a camera; it teaches *inferring* that the camera previously used to film a scene *has* zoomed by the *appearance* of *still* objects moving radially outwards.

In fact, given that the method of Shahraray is solely directed to techniques of analyzing video, and includes *no camera* and hence no steps of *manipulating a camera* in response to the video analysis, the Examiner's assertion that it would be obvious to modify Loveland's *action* step of decreasing magnification of a field of view shown by a camera, and to instead *increase* it (and thus, directly contradicting the teachings of Loveland), is not supported by the type of rational explanation required to state a prima facie case of obviousness. Therefore, the applicant respectfully requests that the Examiner's rejection of claims 27-29 under 35 U.S.C. § 103(a) in view of the combination of Loveland and Shahraray be withdrawn.

In view of the foregoing remarks, the applicant respectfully requests that the Examiner's final; rejection be withdrawn and claims 27-29 be allowed.

Respectfully submitted,



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